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IMPACT OF CHRONIC DISEASES ON HEALTH CARE EXPENDITURES: A MULTIVARIATE LINEAR MODEL FROM PHARMACEUTICAL REIMBURSEMENT DATA
Karakaya G, Van Tielen R, Vanrillaer V, Umbach I
MLOZ, Brussels, Belgium
OBJECTIVES: The aim of the study is to analyze the burden of chronic diseases on public health care expenditures using pharmaceutical data regarding about 2 million individuals. **METHODS:** Data come from the administrative database of the third Belgian health insurance funds. Without explicit diagnoses of diseases in the database, chronic diseases are mainly estimated using drugs prescription (reimbursed medications only) for a treatment of at least 90 days/year. A multivariate linear model based on the OLS method is used to analyse the impact of 23 chronic diseases on health care expenditures, while controlling for age, sex, marital and social status, share of hospital expenditures, residential areas and year of death. **RESULTS:** Monthly average health care costs for people with one or more chronic conditions is 6 times greater than the ones without any chronic conditions (€423 vs. €71). All chronic diseases (except psoriasis) have a significant impact on health care (at 1% level). The last months of life, developing or living with cancer, chronic renal failure, rare disease and mental disorder are the factors having the greatest impact on monthly reimbursed health care expenditures. All things being equal, a person at the end of life costs more than €2,236 per month to the health insurance compared to a person not at the end of life. Respectively this amounts to €3,557, €3,008, €2,042 and €1,151 for people living with a rare disease, chronic renal failure, mental disorder and cancer. **CONCLUSIONS:** Results found in this study are similar to those observed in other countries. Our findings show in particular that chronic diseases significantly drive health care expenditures. Using secondary data allows to classify chronic diseases according to the financial weights while controlling for characteristics of the analysed population. Results highlight the high financial burden of chronic diseases for public health care expenditures and allow decision-makers to take appropriate public health measures.

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THE EFFECT OF CHINA'S BASIC MEDICAL INSURANCE SCHEMES ON HEALTH SERVICE UTILIZATION
Lee C[1], Sun H[2], Guan Q[3], Wasserman M[3]
[1]*Double Helix Consulting, London, UK,* [2]*Nanyang Technological University, Singapore,* [3]*Double Helix Consulting, Singapore*
OBJECTIVES: China's medical insurance coverage surpassed 95% nationwide by 2011 under three basic medical insurance schemes UEBMI, URBMI and NCMS, partly due to the government's heavy investment since 2009. It is still inconclusive whether the increased coverage rate has improved access to care. Past studies using the China Health and Nutrition Survey (CHNS) focused on data before 2009. This study investigates effects of the three different insurance schemes on health services utilization after the 2009 new health reform. **METHODS:** An analysis was conducted on 2009 and 2011 data from the CHNS (sampling totally 23202 people from 9 provinces). To control for confounding factors, propensity score matching models were developed controlling for relevant factors such as age, gender, income, educational level and health status. The level difference of health service utilization was compared between each insured and the uninsured group. Attempts were also made to compare average treatment costs per episode; however the data set is incomplete for statistical analysis. **RESULTS:** In the matched samples, the UEBMI group on average used 2.7% less outpatient services ($p<0.05$) but 1.2% more inpatient services than the uninsured group ($p<0.05$). By contrast, the URBMI group was more likely to pay both outpatient and inpatient visits than the uninsured, although both improvements were not statistically significant ($p>0.05$). People in the NCMS group were 5.6% less likely to use outpatient services ($p<0.05$); they also tended to use inpatient services less ($p>0.05$). **CONCLUSIONS:** Access to care across the varying schemes is not equal. Differences between the UE/URBMI and the uninsured may be resulted from different health statuses, but also they could reflect the tendency among the employed to delay care seeking. The relative underutilization of care by the rural population points again to high co-payment requirement. More research is necessary to understand the interplay of care infrastructure and individual care utilization in China.

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PRICE NEGOTIATION FOR PHARMACEUTICALS IN GERMANY: HIGH INFLUENCE OF EU PRICE WEIGHTING METHOD
Neubauer AS, Voss P, Minartz C, Gmeiner A, Neubauer G
IfG Institute for Health Economics (www.ifg-muenchen.com), München, Germany
OBJECTIVES: To investigate quantitatively, which influence the chosen EU price weighting method has in a theoretical framework model of pharmaceuticals price negotiations. **METHODS:** Three components theoretically determine the reimbursed price of a pharmaceutical under AMNOG conditions in Germany: 1) the level and certainty of added benefit, 2) prices of comparable pharmaceuticals in Germany and 3) the weighted EU price level (post rebates). In a theoretical model the influence of various weighting methods of EU price levels on resulting reimbursement was investigated. **RESULTS:** Several weighting models for EU prices are theoretically feasible. When defining the 15 EU basket countries the German arbitration board had considered a weighting based on volume, approximated by country population size and an adjustment by purchasing power parity. Operationalisation of each of those factors showed a significant influence on results in our simulation: in several example cases a population and PPP health basket (Eurostat) was set as base case. Using a weighting based on GDP (in PPP) instead, resulted in a ~10-15% increase and based on Eurostat general goods basket (in PPP) in a ~20-25% increase in the calculated average EU price level. Actual observed EU drug volumes appeared to rather support such cases than the weighting based on the Eurostat PPP health basket. Which currency exchange rate was used, e.g. yearly vs. daily, Eurostat vs. other sources, had only a minor influence in most constellations. The launched country basket showed an overall high impact, with a frequently high importance of the U. K. as an EU country being launched relatively early. **CONCLUSIONS:** The chosen weighting method of EU prices has a high impact on results of EU average price, which is an important component of German price negotiations. No undisputed method exists at the time of market entry.

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A PAYERS PERSPECTIVE TO PHARMACEUTICAL MARKET ACCESS: DEFINING MARKET ACCESS
Sendyona S
Creativ-Ceutical, London, UK
OBJECTIVES: The payer's perspective is considered after a drug has been granted market access and launched. This is often too late as payers may not want to reimburse expensive drugs, especially if the current gold standard is cost effective compared to alternatives. This is mostly encountered if the drug was, during the clinical trials, compared to sub-standard comparators. This research aims to establish whether there are interventions to consider during a drug development cycle, and how, by using Key Intervention Points, a drug can be successful in the market. The first in a series of questions aims to define what exactly market access is. **METHODS:** A literature review was conducted on Ovid MEDLINE to establish a whether a clear and internationally validated definition of market access has been proposed. Included were articles and/or reviews concerning market access of pharmaceuticals for human use published from January 1999 to present day. **RESULTS:** Market access can be thought of as either gaining regulatory approval from bodies such as Food and Drug Administration or European Medicines Agency to make a drug available to patients, or as developing a drug that achieves blockbuster status through successful reimbursement, either through a high number of sales, or a higher-than-competitor premium price. Regulatory approval and reimbursement are often thought of as being inherently different, yet both share the central principle of balancing the benefits and harms in deciding availability of drugs. The main difference between regulatory approval and reimbursement is the scope of benefits and harm, and the population they consider. **CONCLUSIONS:** Market access is difficult to define, with different opinions and perspectives. There currently lacks a clear, internationally validated method of defining exactly what it market access entails, and what it means to have successfully achieved it. There is a need to definitively define this important concept.

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MARKET ACCESS PATHWAY FOR MEDICAL NUTRITION IN EUROPE AND THE US
Chevrou Séverac H[1], Droeschel D[2], Walzer S[2]
[1]*Takeda Pharmaceuticals International, Zurich, Switzerland,* [2]*MArS Market Access & Pricing Strategy GmbH, Weil am Rhein, Germany*
OBJECTIVES: This analysis aims at presenting different market access pathways of Medical Nutrition (MN) products in the US, France, Germany and the UK. **METHODS:** Systematic review of submission processes for MN and food for special medical purpose (FSMP), combined with experience of the authors from previous research on health economics, Market Access and reimbursement. **RESULTS:** When considering MN delivered in the ambulatory care setting, only in France, innovative MN presenting with therapeutic value faces the medical device reimbursement process. In the UK, the process is handled by the ACBS and focus mainly on clinical outcome and safety; additionally this process sets a reimbursed price. In the US and Germany, there are reimbursed categories for MN linked to composition of the product and dedicated to patients with inability to have their nutritional needs covered by normal food intake (set by CMS in the US and G-BA in Germany). Creating new reimbursed categories linked to new MN either bringing innovative therapeutic value or targeting new disease area is highly difficult in all countries. For MN delivered in hospital settings, products delivered enterally or orally are mainly covered by hospital budget. The budget can be either from the hospital's kitchen for thickened and thickening products, under the diagnosis-related group funding scheme related to each countries, by the nutritionist budget (mainly UK and US) or by the hospital's pharmacy budget for specialties. For standard products, access is obtained based on tenders. In long-term care and nursing home, coverage and funding are more heterogeneous: they vary from highly regulated reimbursed scheme based on composition of the products and disease area to per diem fee per patient covering both food and MN. **CONCLUSIONS:** The market access pathways for granting reimbursement or coverage of the medical nutrition category are very heterogeneous between the analyzed countries.

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THE REIMBURSEMENT OF EXPENSIVE DRUGS IN HOSPITALS IN WESTERN EUROPEAN COUNTRIES
Falk K, Brown A, Murray G, Martensson M
Abacus International, Manchester, UK
OBJECTIVES: Over the past decade increasing numbers of expensive drugs have entered the market, placing a financial burden on hospitals in particular. Many high-cost therapies require use or at least initiation in the hospital setting. Many European countries reimburse hospitals via diagnosis-related group (DRG) systems. However, DRG systems are often insufficient to cover the costs of expensive drugs. Here we assess how expensive drugs are funded in hospitals across markets, what the requirements are, and the process of additional funds being granted. **METHODS:** Publicly available documents, governmental guidelines and regulations were assessed to understand the different processes and requirements expensive drugs need to meet to receive additional funding. Countries included were the UK, France, Germany, Italy, Spain, the Netherlands, Sweden, Denmark, Switzerland, Austria and Portugal. **RESULTS:** In all included countries, hospital treatments are reimbursed via DRG systems, and most provide additional funding for expensive drugs. There